

CLAIMS

1. Method for the selective catalytic reduction of nitrous oxide (N_2O) in the presence of a solid catalyst, with the addition of a saturated hydrocarbon as reducing agent, characterized in that the catalyst used is a promoted iron-containing zeolite.
2. Method according to Claim 1, characterized in that the catalyst is promoted with a precious metal.
3. Method according to Claims 1 and 2, characterized in that the precious metal comprises ruthenium, rhodium, palladium, gold or platinum, or a combination of two or more of these metals.
4. Method according to Claim 1, characterized in that the reducing agent used is natural gas or methane (CH_4) or propane (C_3H_8) or LPG (C_3H_8/C_4H_{10}), or a combination thereof.
5. Method according to Claims 1 and 4, characterized in that the concentration of the reducing agent is set in such a way that the hydrocarbon/ N_2O molar ratio is in the range from 0.2 to 20, preferably in the range from 0.5 to 5.
6. Method according to Claim 1, characterized in that the reduction takes place at an inlet temperature of less than $400^\circ C$.
7. Method according to Claim 1, characterized in that the emission of carbonmonoxide (CO) and of hydrocarbon is in each case separately less than 100 ppmv.
8. Method according to Claim 1, characterized in that the process pressure at which the reduction takes place is between 1 and 50 bar absolute.

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